ABSTRACT

The present invention provides a method and a system for the detection of a target oligonucleotide in a sample. The method comprises, in general, the steps of providing a sensor device having a sensing interface carrying capturing oligonucleotides having each a nucleotide sequence complementary in at least a portion thereof to a first portion of the target oligonucleotide; providing verification oligonucleotides having each a nucleotide sequence complementary in at least a portion thereof to a second portion of the target oligonucleotide, other than the first portion; contacting the sample with the sensing interface under conditions so as to allow the target oligonucleotides, if present in the sample, to hybridize to the capturing oligonucleotides; prior to contacting the sample with the sensing interface or thereafter, allowing the verification oligonucleotides to hybridize to the target oligonucleotides if present in the sample; and detecting the presence of the verification oligonucleotides on the sensing interface. The detection of the verification oligonucleotides being indicative to the presence of the target nucleotide in the sample.